

AMENDMENTS TO THE CLAIMS

Please cancel Claims 1-7 and add new Claims 8-20, below.

1-7. (Canceled).

8. (New) A method for preparing self-assembled silicon nanotubes (SiNTs) comprising:

forming a mixture of silicon oxide and water, wherein said mixture has a silicon oxide to water ratio of 0.01 to 10% by weight; and

maintaining said mixture at a temperature of about 200°C to about 500°C and a pressure of about 3 MPa to about 40 MPa for 1 to 5 hours while stirring.

9. (New) The method of Claim 8 further comprises placing said mixture in a sealed reaction kettle.

10. (New) The method of Claim 8, wherein the said mixture has a silicon oxide to water ratio of 0.05% to 8% by weight.

11. (New) The method of Claim 8, wherein the said mixture has a silicon oxide to water ratio of 0.1% to 6% by weight.

12. (New) The method of Claim 8, wherein said temperature and pressure are maintained at about 250°C to about 500°C and about 8 MPa to about 35 MPa for 1 to 4 hours while stirring.

13. (New) The method of Claim 8, wherein said temperature and pressure are maintained at about 300°C to about 450°C and about 10 MPa to about 30 MPa for 1 to 3 hours while stirring.

14. (New) The method of Claim 8, wherein said temperature and pressure are maintained at about 300°C to about 400°C and about 6 MPa to about 10 MPa for 2 to 4 hours while stirring.

15. (New) The method of Claim 8, wherein said mixture is stirred uniformly by a magnetic stirrer.

16. (New) A silicon nanotube prepared according to the method of Claim 8.

17. (New) A self-assembled silicon nanotube (SiNT), comprising:

a tubular body having a crystalline silicon wall layer having a thickness of about 5 nm or less and defining an inner pore diameter of about 5 nm or less, said tubular body having an outer amorphous silica layer having a thickness of less than 2 nm;

Int'l Appl. No. : **PCT/CN05/000630**
Int'l Filing Date : **May 8, 2005**

wherein the tubular body has closed ends and an outer diameter in the range of about 8 to 20 nm.

18. (New) A self-assembled silicon nanotube of Claim 17, wherein the tubular body has semicircular closed ends.

19. (New) A self-assembled silicon nanotube of Claim 17, wherein an interplanar spacing of crystalline silicon is about 0.31 nm.

20. (New) A self-assembled silicon nanotube of Claim 17, wherein an outer diameter of the growth tips of the tubular body is larger than that of the tubular body.